



Urban Agenda Platform

*The global platform for sharing progress, action and knowledge on the implementation of the New Urban Agenda to achieve sustainable urban development.*

# smartCATALONIA: Scaling the Smart City Concept to a Regional Initiative

Award Scheme

Guangzhou Award

Sustainable Development Goals

Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

## Summary

smartCATALONIA is an initiative by the Government of Catalonia forming a network of more than 50 cities, and 350 private partners, including research and technology centers, industry and companies, start-ups and academia, to share challenges, best practices and deploy urban solutions, generating economies of scale by adopting similar projects, and developing new business models to implement and sustain urban innovation across the region

## Background and Objective

The initiative was initially launched in October 2014 to integrate challenges and solutions and promote city governance. Later, in December 2016, having assessed its success through the implementation of innovation in public services and promoting economic growth across some fifty networked cities, the initiative was reinforced to further economic growth and alignment with international frameworks, such as the Sustainable Development Goals (SDGs) and the New Urban Agenda. BACKGROUND INFORMATION Two Government Agreements have promoted the development and implementation of smartCATALONIA initiative: 28 October 2014 and 13 December 2016. Initially, smartCATALONIA was aligned with the European Commission's axis for a sustainable development. In 2018, smartCATALONIA has been measured against the SDGs, in order to assess its impact in the global framework and determine to what extent the different cities and communities in Catalonia are aligned with global objectives. ORIGINS The overarching reason for promoting smartCATALONIA is the conviction that digital technologies are an essential tool for pursuing the objectives of Economic competitiveness Qualified employment Digital skills, including addressing gender gap in ICT Efficient management of resources, infrastructures Improving the environment and quality of life Efficiency of public services and citizen engagement The challenge was addressing urban development in some 50 municipalities, bringing forward the benefits of innovation and technology for improving citizen quality of life, creating business opportunities and tackling technology and investment risks. smartCATALONIA involves the government of Catalonia, the councils of the different municipalities, technology and research centers, industries and solution providers. Overall, more than 70 public entities and 350 private partners. The goals of smartCATALONIA are Developing a new regulatory framework for the new digital economy, including a regulation on digital rights and responsibilities. Promoting a framework to enhance collaborations between the Government and municipalities and the private sector. Promoting a more equitable development of the territory. Deploying urban initiatives in the territory with a rationale of sharing projects and gaining critical mass. Strengthening the competitive position through: Big data, 5G, Block chain, AI, Cybersecurity. Promoting technological careers among young people and women. Promoting the deployment of the Open Government strategy of the Government and its interrelationship with other municipalities. The initiative hopes to engage 60 cities with 400 urban projects and 57,000 STEM students by 2020. smartCATALONIA is a Government-led initiative that pursues public-private alliances for developing projects:- IoT Catalan Alliance: Local Internet of things consortium to promote IoT Industry (65 companies, 35 non-profit entities).- Catalonia Smart Drones: Group that promotes the sector of services and solutions with drones (Government, 61 companies, 26 non-profits).- 5GBarcelona: public-private initiative to transform the metropolitan area of Barcelona into a European reference innovation lab of 5G technologies, with open experimental infrastructures (3 Government bodies, 5 research centres, 15 companies) Public budget (both from the Government and municipalities) is integrated with private investments in the form of solution development for initial testing. European funding is also an asset for developing projects in consortia.

## Outcomes and Impacts

Until July 2018, 95 solutions have been implemented in 52 cities partnering with 73 companies. Specific outcomes from projects: smartCATALONIA Challenge: competition to promote the creation of new solutions to face city challenges 2 editions, 700 participants, 90 solutions, 18 projects in 9 municipalities. Solutions include: Minuts (participation), Daysk (coworking), YoTeCuido(health), Psonrie (health), Whereis (social care), Bisafe and BusUp (mobility). Catalonia smartLab: network of urban laboratories across Catalan municipalities to test and validate urban solutions in real environments 15 solutions tested in 10 cities, including smart mobility and parking, waste,e-voting, energy. Currently, business models for the deployment of these projects at a largescale are being studied. In order to collaborate with other cities, Catalonia is also partnering with the European Commission. Through the Observatory smartCATALONIA, the Government assesses the development of the initiative (<http://observatori.smartcatalonia.gencat.cat/>).



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Information includes the state of deployment of urban solutions in the cities. It also showcases the different solutions tested, the metrics and business models for solution delivery and the market/ challenge needs (see additional documentation). This is an open tool. Users of the Observatory include: municipalities, citizens, industry, research centers. It is very efficient in searching partnerS for joint projects and for sharing city challenges and needs. Indicators: Cities: number of inhabitants, maturity level, technology needs, urban challenges, priority areas. Research centers: areas, technologies. Companies: solution, technology areas, competences. The Observatory smartCATALONIA has specifically been developed to offer the state of development of the different initiatives, to exchange experiences and create synergies, catalyze projects and solutions, offer a marketplace for business development and visualize what's been done and how.

## Innovative Initiative

smartCATALONIA is a revolutionary initiative of territorial innovation, and the first region to establish a program to further integrated economic and urban development of its communities. This is a very innovative initiative with no previous references, although through international relations and benchmarking processes Catalonia has learnt from other experiences world-wide. Some examples: Catalonia smartLab: the experience of "traditional" Innovation Labs was brought into a network of urban laboratories to test and validate solutions in real environments. Its aim is twofold: promote the technology by providing access to infrastructure and equipment, and enhancing open innovation in cities by participating in pilot tests. So far, 15 smart projects have been developed in different Catalan cities. Platform for Smart Region: the idea of smart city platform is being developed integrating different cities' data and information in a unique shared platform. It is also being developed with other layers of government. Parking (Aparcar) App: many cities have App's for on street parking. But the innovation here lays in the fact that a single app is used for all cities. It streamlines the payment process in the parking zone without having to go to the meter. Thanks to the geo-location system, the app locates the street where it has been parked and the corresponding rate in each case. From its inception smartCATALONIA is innovative, and therefore innovation is applied in all levels: Facilitating the linking of the elements of the innovation ecosystem in Catalonia: municipalities, industry, research and technology centers, academia and talent. Testing, researching, prototyping and deploying urban solutions and new technologies to improve cities. Generating a market and industry for these kinds of solutions: attracting investments, talent and start-ups that generate economic tissue and growth. Developing new business models for the sustainability of urban solutions: promoting new business models, alliances and PPPs. Initial obstacles appeared in the form of the multiplicity of stakeholders to integrate. A Governance model has resulted to be very effective in order to align efforts and resources, and bear track of the innovations developed and deployed.

## Conclusion

The city is working on joint partnerships and agreements with other cities and territories in the world in order to exchange best practices, lessons learnt and promote joint collaboration projects between municipalities and companies: Rhône-Alpes (France), Lombardy (Italy), Baden-Wurttemberg (Germany), Singapore, Québec (Canada), Flanders (Belgium), California (US), Estonia, Macau (China), etc. For example, a specific agreement has been pursued with institutions from Québec in order to learn from their drone industry and ecosystem. Or in India, in order to bring them the Catalanian experience in a citizen collaborative project for mobile network coverage, which is very useful in rural areas and less developed communities. In order to further contribute not only to Catalonia's own territory development but also to the global development, Catalonia is committed to the SDGs. Therefore Catalonia is currently studying the impact of the smartCATALONIA initiative against the 17 SDGs and the 169 sub-goals. Catalonia believes this will also serve to scale and share successful solutions with other cities and communities in the world. This study will be presented at the Smart City Expo 2018 (November in Barcelona).